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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,005	03/30/2004	Kyoko Honbo	A8319.0017/P017-A	2673
24998 7590 03/01/2007 DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER ALEJANDRO, RAYMOND	
			ART UNIT	PAPER NUMBER
			1745	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/01/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/812,005

Applicant(s)

HONBO ET AL.

Examiner

Raymond Alejandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/30/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/096,505.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/30/04, 01/17/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. This application is a continuation of application 10/096505, filed on 03/12/02.
2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in aforementioned parent application.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on 01/17/06 and 03/30/04 were considered by the examiner.

Drawings

5. The drawings were received on 03/30/04. These drawings are acceptable.

Specification

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
7. The abstract of the disclosure is objected to because the present claims are to a carbon material per se, not to a lead acid battery. Correction is required. See MPEP § 608.01(b).
8. The disclosure is objected to because of the following informalities: the status of the parent application (whether abandoned or patented and its patent number) must be updated. Appropriate correction is required.
 - The preliminary amendment dated 03/30/04 does not introduce new matter into the disclosure.

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Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hohjo et al. 5156935.

The objective of the present claims is aimed at a carbon material wherein the disclosed inventive concept comprises the specific substances/compounds added thereto.

With respect to claims 16-18:

Hohjo et al teach a carbon material used in a negative plate for a lead acid battery a lead acid battery (ABSTRACT/CLAIM 1/EXAMPLE 1/ Col 3, lines 50-65). Hohjo et al disclose the use of carbon whisker particles having a specific particle diameter (Col 3, lines 58-67/ EXAMPLE 1) or carbon black in EXAMPLE 4 (COL 6, lines 15-21/EXAMPLE 4/COL 8, lines 56-60).

EXAMPLE 4 shows the addition of graphite whiskers and potassium-based (K) whiskers (COL 6, lines 29-35/EXAMPLE 5/COL 9, lines 45-48). *Thus, the carbon material also contains a simple substance including K.* It is also disclosed that when using carbon whiskers, for example by using a mixed paste of alkali metal salts, among others, an active material high in

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density is obtained (COL 10, lines 35-55). *Thus, the carbon material also contains a simple substance including K and/or any other alkali metal.*

With respect to the specific characteristic of having a catalysis for desulfurization or SO_x oxidation, it is contended that since both of the disclosed materials (i.e. the carbon material and the K-based whiskers and/or alkali-based materials) assist in the redox reaction of the cell they are also capable of inducing such desulfurization and/or oxidation. Thus, such a property or characteristic is inherent to the nature of the disclosed material.

Thus, the instant claims are anticipated.

11. Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Vasta 4589999.

As to claims 16-18:

Vasta divulges carbon materials employed in lead alloy grids for a lead acid storage battery wherein the grids are coated with a composition containing electrically conductive pigments such as carbon black, graphite and the like (COL 2, lines 20-25/ CLAIM 7). It is disclosed that typical conductive pigment are carbon black pigments such as furnace black, acetylene black and graphite (COL 2, lines 30-34); mixtures of carbon black pigments and finely divided graphite are used; and transition metal oxides are useful as conductive pigment as well (COL 2, lines 33-38). *Thus, the carbon also contains metal substance. Thus, Vasta enables to use furnace black in both electrode grids for lead-acid batteries; and therefore, adding the carbon material to the anode.*

Vasta specifically teaches the use of furnace black in the composition for coating the electrode grids (COL 2, lines 20-36). *In view of the fact that applicants disclose (see page 8,*

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lines 3-14 of the specification) that since "fuel oil contains impurities such as Ni, Cu, Zn, and Mn in a large amount, the furnace black produced therefrom also contains the above elements in a large amount", it is thus asserted that the claimed substance(s) and its specific content (ppm) in the furnace black of the prior art is inherent to the same carbon material, namely, the furnace black. Accordingly, products of identical chemical composition can not have mutually exclusive properties, and thus, the instant characteristic and/or property of having the claimed impurities (substance) and its specific content (ppm), is necessarily present in the prior art material.

With respect to the specific characteristic of having a catalysis for desulfurization or SO_x oxidation, it is contended that since both of the disclosed material (i.e. the oil-derived furnace black containing certain impurities) assist in the redox reaction of the cell they are also capable of inducing such desulfurization and/or oxidation. Thus, such a property or characteristic is inherent to the nature of the disclosed material.

In consequence, Vasta anticipates the present claims.

12. Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanawa et al 5938798.

As to claims 16-18:

Hanawa et al disclose a cathodic active material for use in a dry cell (TITLE/Abstract) comprising carbon powder with manganese dioxide being pulverized and then adding more carbon powder (COL 4, lines 60-67). *Thus, Hanawa et al disclose a carbon powder containing at least a simple substance of manganese dioxide regardless of the specific final composition of the mixture.*

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1st Examiner's note: the specific preamble recitation "for use in a lead-acid battery" refers to intended use. That is to say, the instant claims are directed to a carbon material per se and the preamble phrase "for use..." is only a statement of ultimate intended utility

2nd Examiner's note: with respect to the specific characteristic of having a catalysis for desulfurization or SO_x oxidation, it is contended that since both of the disclosed materials (i.e. the carbon powder and the manganese based material) assist in the redox reaction of the cell they are also capable of inducing such desulfurization and/or oxidation. Thus, such a property or characteristic is inherent to the nature of the disclosed material.

13. Claims 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt et al 5640371.

As to claims 16-17:

Schmidt et al disclose a tungsten powder loaded carbon composite (COL 9, lines 24-28). Thus, Schmidt et al at once envisage the formation of W-loaded carbon materials.

1st Examiner's note: the specific preamble recitation "for use in a lead-acid battery" refers to intended use. That is to say, the instant claims are directed to a carbon material per se and the preamble phrase "for use..." is only a statement of ultimate intended utility

2nd Examiner's note: with respect to the specific characteristic of having a catalysis for desulfurization or SO_x oxidation, it is contended that both of the disclosed materials (i.e. the carbon powder and tungsten) are capable of inducing such desulfurization and/or oxidation. Thus, such a property or characteristic is inherent to the nature of the disclosed material.

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14. Claims 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Chuang et al 2004/0050713.

As to claims 16-18:

Chuang et al disclose a catalytic cathode wherein the support thereof is formed from carbon powder onto which has been deposited (loaded) metal catalyst (P0073), the metal catalyst being silver, nickel, cobalt, manganese, vanadium, copper, zinc, or mixtures thereof (P0072).

1st Examiner's note: the specific preamble recitation "for use in a lead-acid battery" refers to intended use. That is to say, the instant claims are directed to a carbon material per se and the preamble phrase "for use..." is only a statement of ultimate intended utility

2nd Examiner's note: with respect to the specific characteristic of having a catalysis for desulfurization or SO_x oxidation, it is contended that since both of the disclosed materials (i.e. the carbon powder and any one of either silver, nickel, cobalt, manganese, vanadium, copper, zinc, or mixtures thereof) assist in the redox reaction of the cell they are also capable of inducing such desulfurization and/or oxidation. Thus, such a property or characteristic is inherent to the nature of the disclosed material.

15. Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese publication JP 61-238393 (heretofore the JP'393).

As to claims 16-18:

The JP'393 makes known active carbon, preferably in the form of powder or crushed particles, being loaded with alkali metal or alkaline earth metals such as Na, K or Mg or their compounds (ABSTRACT).

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1st Examiner's note: the specific preamble recitation "for use in a lead-acid battery" refers to intended use. That is to say, the instant claims are directed to a carbon material per se and the preamble phrase "for use..." is only a statement of ultimate intended utility

2nd Examiner's note: with respect to the specific characteristic of having a catalysis for desulfurization or SO_x oxidation, it is contended that both of the disclosed materials (i.e. the carbon powder and any one of the alkali/alkaline earth metals) are capable of inducing such desulfurization and/or oxidation. Thus, such a property or characteristic is inherent to the nature of the disclosed material.

16. Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese publication JP 61-101250 (heretofore the JP'250).

As to claims 16-18:

The JP'250 reveals carbon black powders loaded with Cu particles (ABSTRACT).

1st Examiner's note: the specific preamble recitation "for use in a lead-acid battery" refers to intended use. That is to say, the instant claims are directed to a carbon material per se and the preamble phrase "for use..." is only a statement of ultimate intended utility

2nd Examiner's note: with respect to the specific characteristic of having a catalysis for desulfurization or SO_x oxidation, it is contended that both of the disclosed materials (i.e. the carbon powder and Cu particles) are capable of inducing such desulfurization and/or oxidation. Thus, such a property or characteristic is inherent to the nature of the disclosed material.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282.

The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.

Raymond Alejandro
Primary Examiner
Art Unit 1745


**RAYMOND ALEJANDRO
PRIMARY EXAMINER**